CLAIMS

WHAT IS CLAIMED IS:

1. A water-based adhesive composition, comprising an admixture of:

A. about 5 to about 80 wt% of an aqueous polyester polyurethane dispersion; and

B. about 95 to about 20 wt% of an aqueous aliphatic polyurethane dispersion.

2. The water-based adhesive composition of claim 1, wherein said aqueous polyester polyurethane dispersion comprises from about 15 to about 25 wt% of said admixture, based on the total weight of said composition.

3. The water-based adhesive composition of claim 1, wherein said aqueous polyester polyurethane dispersion comprises from about 17 to about 23 wt% of said admixture, based on the total weight of said composition.

4. The water-based adhesive composition of claim 1, wherein said aqueous aliphatic polyurethane dispersion comprises from about 85 to about 75 wt% of said admixture, based on the total weight of said composition.

5. The water-based adhesive composition of claim 1, wherein said aqueous aliphatic polyurethane dispersion comprises from about 83 to about 78 wt% of said admixture, based on the total weight of said composition.

6. The water-based adhesive composition of claim 1, further comprising about 0.005 to about 2 wt% of one or more additives selected from the group consisting of film-forming agents, slip agents, flow agents, adhesion promotors tackifiers, surfactants, defoamers, decorative components, and combinations thereof.

7. The water-based adhesive composition of claim 6, wherein said adhesion promotor is an epoxylated silane adhesion promotor.

8. The water-based adhesive composition of claim 7, wherein said epoxylated silane adhesion promotor is γ-glycidoxypropyltrimethoxysilane.

9. The water-based adhesive composition of claim 1, further comprising from about 0.5 wt% to about 25 wt% of a solvent.

10. The water-based adhesive composition of claim 9, wherein said solvent is selected from the group consisting of water, N-methylpyrrolidone, butylcarbitol, 2-butoxyethanol, 2,2-butoxyethoxyethanol, and combinations thereof.

11. A water-based adhesive composition, comprising an admixture of:

A. about 17.5 to about 22.5 wt% of an aqueous polyester polyurethane dispersion;

B. about 82.5 to about 77.5 wt% of an aqueous aliphatic polyurethane dispersion;

C. about 0.005 to about 2 wt% of one or more additives selected from the group consisting of film-forming agents, adhesion promotors,

tackifiers, surfactants, defoamers, decorative components, and combinations thereof; and

D. about 0.5 to about 25 wt% of a solvent selected from the group consisting of water, N-methylpyrrolidone, butylcarbitol, 2-butoxyethanol, 2,2-butoxyethoxyethanol, and combinations thereof.

12. The water-based adhesive composition of claim 11, wherein said adhesion promotor is an epoxylated silane adhesion promotor agent.

13. The water-based adhesive composition of claim 12, wherein said epoxylated silane adhesion promotor is γ-glycidoxypropyltrimethoxysilane.

14. A method of adhering a workpiece to a substrate, comprising the steps of:

A. applying a water-based adhesive composition to a substrate, said water-based adhesive composition comprising an admixture of:

1. about 17.5 to about 22.5 wt% of an aqueous polyester polyurethane dispersion;

2. about 82.5 to about 77.5 wt% of an aqueous aliphatic polyurethane dispersion;

3. about 0.005 to about 2 wt% of one or more additives selected from the group consisting of film-forming agents, adhesion promotors, tackifiers, surfactants, decorative components, defoamers, and combinations thereof; and

4. about 0.5 to about 25 wt% of a solvent selected from the group consisting of water, N-methylpyrrolidone, butylcarbitol, 2-butoxyethanol, 2,2-butoxyethoxyethanol, and combinations thereof;

B. curing said water-based adhesive onto said substrate; and

C. adhering said workpiece onto said substrate.

15. The method of claim 14, wherein said adhesion promotor is an epoxylated silane adhesion promotor.

16. The method of claim 14, wherein said epoxylated silane adhesion promotor is γ-glycidoxypropyltrimethoxysilane.

17. The method of claim 14, wherein said applying step is accomplished by draw down rod, doctor blading, gravure roll, spraying, or dipping.

18. The method of claim 14, wherein said curing step occurs at between 200 and 500°F for between 2 and 50 seconds.

19. The method of claim 14, wherein said adhering step comprises pressing said substrate and said workpiece together at about 100 psi for approximately 5-60 seconds.

20. The method of claim 14, wherein said substrate is selected from the group consisting of stainless steel, aluminum, copper, iron, cold rolled steel, phosphatized steel, primer-coated steel, polyester reinforced fiber glass, butyrates, PVC, ABS, injection molded urethanes, polystyrenes, polyimides, polyamides, and combinations thereof.

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